CAUSAL RELATIONSHIP MODEL OF LITTLE GREEN CHILD WITH ENVIRONMENTAL BEHAVIOR

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Abstract

The populations were 274 students of Mahasarakham University Demonstration School (Elementary) in Northeastern region of Thailand in academic year of 2012. The populations of 274 elementary students at level 4-6 were used as sample group. The questionnaire was used as instrument for data collection. LISREL was used for model verification. Considering on structural model confirmatory factors of Environmental Education (EE) and Environmental Management (EM) were able to explain the variation of endogenous factors of Inspiration of Public Mind (PM) to caused Environmental Conservation Behaviors (CB) with 87.00 percents. As a result, the equation 1, it can be written as following. $CB = 0.46 \times PM + 0.20 \times EM + 0.12 \times EE$ (1) $R^2 = 0.87$

Moreover, confirmatory factors of Environmental Management (EM) and Environmental Education (EE) were able to explain the variation of confirmatory factors of Inspiration of Public Mind (PM) with 75.0 percents. Therefore, the equation can be written as following equation. $PM = 1.30 \times EM - 0.57 \times EE$ (2) $R^2 = 0.75$

Keywords: Causal Relationship Model / Little Green Child / Environmental Behavior

Introduction

The United Nations Convention on the Rights of the Child defines a child as states in Article 1 that “a human being below the age of 18 years unless under the law applicable to the child, majority is attained earlier” (Office of the United Nations Higher Commissioner for Human Rights, 2012). Biologically a child (plural: children) is generally a human between the stages of birth and puberty. Some vernacular definitions of a child include the fetus, as being an unborn child. The legal definition of “child” generally refers to a minor, otherwise known as a person younger than the age of maturity (Wikipedia, 2012). The age of majority is the threshold of adulthood as it is conceptualized (and recognized or declared) in law. It is the chronological moment when minors cease to legally be considered children and assume control over their lives.
persons, actions, and decisions, in that way terminating the legal control and legal responsibilities of their parents or guardian over and for them. The vast majority of countries set maturity at 18 years including Thailand set in some legal issues such as right to election. However, childhood is the age span ranging from birth to adolescence. In developmental psychology, childhood is divided up into the developmental stages of toddlerhood (learning to walk), early childhood (play age), middle childhood (elementary school age), and adolescence (puberty through post-puberty). Middle childhood begins at around age seven or eight, approximating primary school age and ends around puberty, which typically marks the beginning of adolescence (Wikipedia, 2012, & Cannella, and Kincheloe, 2002). According to traditional culture, Thai people has believed that children like white clean cloth, therefore if we want to cultivate trait or habit of environmental conservation behavior, we should start as soon as possible whenever they are ready to understand some abstract concept and principle of environmental education and environmental management. The children with middle childhood might be proper age for raising awareness, adjusting attitude, and changing behavior for environmental conservation including energy conservation, waste management with recycling and tree cultivation. Particularly, the psychological development should be paid attentions for elementary school age because it would develop the learning ability to think and understand with abstract thinking, and to develop self-awareness, self-image, self-esteem, self-control and independence, so if they have a successful experience would support them to attain self-confidence to practice as good global citizen to take responsibility for environmental quality in future (Thiengkamol, 2011j, and Thiengkamol, 2012c). Even though, the mood or emotion might be fluctuated according to events and situation but the moral development might be idealism. On the other hand, they can make a justice of right or wrong (Ketuman, 2007 and Thiengkamol, 2012b). Particularly, Thiengkamol mentioned that the child is our hope of future generation with environmental ethics for environmental conservation through daily activities with public mind for family, school, society and country. In order to meet sustainable development, they should pay their attention to have to participate for environmental conservation based on public mind and responsibility for environmental management in school (Thiengkamol, 2011e, and Thiengkamol, 2011i).

Principally, Thiengkamol declared that the significant characteristics of environmental education volunteer or trainer should have knowledge and understanding, and awareness, responsibility and public mind based on inspiration of public mind. Furthermore, contribution in environmental activities and decision making on environmental problem solving would be emphasized in daily life practice until it turns into various environmental behaviors such as consumption behavior, recycling behavior, energy conservation behavior, traveling behavior, forest conservation behavior and knowledge transferring behavior, therefore these behaviors are able to bring about real sustainable development. Commonly, these essential characteristics should be established through all educational channels whether the formal education, informal education, non-formal education and lifelong education (Thiengkamol, 2009a, 2009b, 2011e, & 2012a). These concepts are also harmonious to findings that disclosed from the research that there are 14 essential Environmental Education Characteristics (EECs) composed of 1) ability to transfer environmental knowledge, 2) to stimulate others to realize the importance of environmental conservation, 3) to have deeply awareness about environment and natural resources, 4) to have public mind for...
environmental conservation, 5) to have a positive attitude for environmental conservation, 6) to have value that for environmental conservation be everyone duty, 7) to have a sensitivity of environmental conservation, 8) to wish to take a responsibility for environmental conservation, 9) to participate to environmental conservation activities regularly, 10) to be consistency of self practice for environmental conservation, 11) to have ability to make correct decision for environmental conservation, 12) to practice as a role model of environmental conservation for public perception, 13) to have correct environmental knowledge and 14) to understanding to introduce and transfer environmental knowledge for others to practice correctly (Charoensilpa, et al, 2012b). Consequently, the elementary school students is an energetic and curiosity to learn, if they are inspired with more public consciousness or public mind with appropriate activities such as learning and training of environmental management regarding energy conservation, waste management and tree conservation in school and community through daily practice until it becomes their habits (Thiengkamol, 2011i, & Thiengkamol, 2011j). These activities will steer them to appreciate on importance of environment and natural resource conservation to be a valuable global citizen who must take a responsibility to maintain the environmental quality for their and next generations, as a result, this will achieve a genuine sustainable development because they are our prospect. They will be important change agents for us if they gain more knowledge and understanding on the essence of interrelationship among all living things on the earth, therefore, they are able to make a right decision making to direct themselves with skillfulness and to become permanent behaviors in daily practice until it becomes a everlasting habit. Mahasarakham University is a leading university in the Northeastern of Thailand with highest number of undergraduate students with 37,156 students in academic year 2012. The President Supach I Samappito has launched the green university concept since 2009 with vision of “First we must make our university a great place to work and learn with green energy, green technology, green vehicles and green waste disposal. We need to ensure that we are eating clean, healthy food and working and studying in a pleasant sustainable environment.” (Mahasarakham University, 2012). Therefore, Mahasarakham University Demonstration School (Elementary) should be a leader for development of little green child with environmental conservation model in term of energy conservation, waste management, and tree conservation with integration of environmental education principles through inspiration of public mind for environmental conservation to meet sustainable development along with vision of president. In order to develop a causal relationship model of little green child with environmental behavior, it is essential to understand the relationship among environmental education principle, environmental management, inspiration of public mind and numerous behaviors to accomplish sustainable development with verification the model with different statistical index. These relationships would be guidance for academics to use for implementation for their target groups whether children, students and general people to use them for inspire them adjust their daily behaviors to conserve environment and natural resources to achieve genuine sustainable development (Thiengkamol, 2008, 2009a, 2009b, 2011e, 2011f, 2011i, 2011j, 2012a, 2012b, & 2012c).

Objective
The research objective was to develop a causal relationship model of little green child with environmental behavior.
Methodology
The research design was implemented in steps by step as follows:
1) The populations of 274 students at elementary school 4-6 levels of Mahasarakham University Demonstration School (Elementary) in academic year of 2012, were used as sample group. The research instrument was the questionnaire and it was used for data collection. LISREL was used for model verification. The content and structural validity were determined by Item Objective Congruent (IOC) with 5 experts in the aspects of environmental education, psychology, social science and social research methodology. The reliability was done by collecting the sample group from 30 elementary school students from Demonstration School Elementary of Rajabhat Mahasarakham University that locates nearby. The reliability was determined by Cronbach's Alpha. The reliability of environmental education, environmental management, inspiration of public mind, and environmental behaviors, and the whole questionnaire were 0.912, 0.862, 0.878, 0.883 and 0.964 respectively. 2) The descriptive statistics used were frequency, percentage, mean and standard deviation. The inferential statistics used was LISREL by considering on Chi-Square value differs from zero with no statistical significant at 0.05 level or Chi-Square/df value with lesser or equal to 2, Pvalue with no statistical significant at 0.05 level and RMSEA (Root Mean Square Error Approximation) value with lesser than 0.05 including index level of model congruent value, GFI (Goodness of Fit Index) and index level of model congruent value, AGFI (Adjust Goodness of Fit Index) between 0.9-1.00.

Results
General Characteristics of Sample Group
The populations of 274 students at elementary school 4-6 levels of Mahasarakham University Demonstration School (Elementary) in academic year of 2012, were used as sample group. Most of them had age with mean of 10.602 years and were female with 50.73%. They lived at their home with 90.15 percents. Majority of their father had marriage status with 91.97%, their father education level at bachelor or higher with 76.64%, and occupation as government officer with 47.09%. Majority of their mother had marriage status with 91.97%, their father education level at bachelor or higher with 77.014%, and occupation as government officer with 51.11%. Father age and mother age had mean of 43.008 and 40.334 years. Father income and mother income had mean of 1,000,000 and 500,000 Bahts as presented in table1.

Table 1: Demographic Characteristics of Sample Group
<table>
<thead>
<tr>
<th>Age</th>
<th>Mean (years)</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max 12 years, Min 8 years</td>
<td>10.602</td>
<td>1.003</td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
<td>100</td>
</tr>
<tr>
<td>Sex</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>1. Male</td>
<td>135</td>
<td>49.27</td>
</tr>
<tr>
<td>2. Female</td>
<td>139</td>
<td>50.73</td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
<td>100</td>
</tr>
<tr>
<td>Residence</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>1. Home</td>
<td>247</td>
<td>90.15</td>
</tr>
<tr>
<td>2. Relative Home</td>
<td>8</td>
<td>2.92</td>
</tr>
<tr>
<td>3. Rent</td>
<td>19</td>
<td>6.93</td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
<td>100</td>
</tr>
<tr>
<td>Father Status</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Marriage</td>
<td>252</td>
<td>91.97</td>
</tr>
<tr>
<td>Widowhood/Divorce/Separated</td>
<td>22</td>
<td>8.03</td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
<td>100</td>
</tr>
<tr>
<td>Father Education Level</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Lower than Lower Secondary School</td>
<td>10</td>
<td>3.65</td>
</tr>
<tr>
<td>Upper Secondary School/Vocational School</td>
<td>24</td>
<td>8.76</td>
</tr>
<tr>
<td>Diploma/High Vocational School</td>
<td>30</td>
<td>10.95</td>
</tr>
<tr>
<td>Bachelor or Higher</td>
<td>210</td>
<td>76.64</td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
<td>100</td>
</tr>
</tbody>
</table>
Confirmatory Factors Analysis of Exogenous Variables

Confirmatory Factors Analysis of Exogenous Variables of Environmental Education (EE)
Confirmatory factors of EE had Bartlett’s test of Sphericity of 905.630 statistically significant level (p< .01) and Kaiser–Mayer–Olkin Measure of Sampling Adequacy/MSA) of 0.862. This indicated that components of EE aspect had proper relationship at good level and it can be used for analysis of confirmatory factors as shown in picture 1 and table 2.

Picture 1: Model of Confirmatory factors of Environmental Education
Table 2: Results of Analysis of Confirmatory factors of Environmental Education

<table>
<thead>
<tr>
<th>Components of Environmental Education</th>
<th>Weight</th>
<th>SE</th>
<th>t</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 Knowledge and Understanding</td>
<td>0.30</td>
<td>0.032</td>
<td>9.23**</td>
<td>0.30</td>
</tr>
<tr>
<td>X2 Environmental Attitude</td>
<td>0.48</td>
<td>0.028</td>
<td>16.83**</td>
<td>0.72</td>
</tr>
<tr>
<td>X3 Environmental Awareness</td>
<td>0.59</td>
<td>0.032</td>
<td>18.60**</td>
<td>0.82</td>
</tr>
<tr>
<td>X4 Environmental Public Mind</td>
<td>0.54</td>
<td>0.035</td>
<td>15.36**</td>
<td>0.64</td>
</tr>
<tr>
<td>X5 Environmental Responsibility</td>
<td>0.58</td>
<td>0.035</td>
<td>16.49**</td>
<td>0.70</td>
</tr>
</tbody>
</table>

Chi-square = 1.94  
df = 3  
P = 0.58465  
GFI = 1.00  
AGFI = 0.99  
RMSEA = 0.000  
RMR = 0.00036  
** Statistically significant level of .01

From picture 1 and table 2, results of analysis of confirmatory factors of EE from 5 observed variables was revealed that the model was congruent to empirical data by considering from 1) Goodness of Fit Index (GFI) equaled to 1.00 and Adjust Goodness of Fit Index (AGFI) equaled to 0.99 2) Root Mean Square Error of Approximation (RMSEA) equaled to 0.000 (RMSEA < 0.05) and 3) Chi-Square value had no statistically significant at level of .01 and degree of freedom was lesser than or equaled to $\chi^2 / df \leq 5.00$. Considering on loading weight of observed variables in
model, it was revealed that observed variables had loading weight with 0.30 to 0.59 and had covariate to model of Environmental Education with 30.00 to 82.00 percents.

**Confirmatory Factors Analysis of Exogenous Variables of Environmental Management (EM)**
Confirmatory factors of EM had Bartlett’s test of Sphericity of 407.742 statistically significant level (p< .01) and Kaiser–Mayer–Olkin Measure of Sampling Adequacy/MSA) of 0.739. This indicated that components of Environmental Management (EM) aspects had proper relationship at good level and it can be used for analysis of confirmatory factors as shown in picture 2 and table 3.

**Picture 2: Model of Confirmatory factors of Environmental Management**

![Model of Confirmatory factors of Environmental Management](image)

Chi-Square=0.00, df=0, P-value=1.00000, RMSEA=0.000

**Table 3:** Results of Analysis of Confirmatory factors of Environmental Management

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From picture 2 and table 3, results of analysis of confirmatory factors of Environmental Management (EM) from 3 observed variables was revealed that the model was congruent to empirical data by considering from 1) Goodness of Fit Index (GFI) equaled to 1.00 and Adjust Goodness of Fit Index (AGFI) equaled to 1.00 2) Root Mean Square Error of Approximation (RMSEA) equaled to 0.000 (RMSEA < 0.05) and 3) Chi- Square value had no statistically significant at level of .01 and degree of freedom was lesser than or equaled to .05 (\( \chi^2 / df \leq 5.00 \)).

Considering on loading weight of observed variables in model, it was revealed that observed variables had loading weight with 0.56 to 0.57 and had covariate to model of Environmental Management (EM) with 66.00 to 77.00 percents.

3. Confirmatory Factors Analysis of Endogenous Variables

Results of Confirmatory Factors Analysis of Endogenous Variables of Inspiration of Public Mind influencing to Environmental Behaviors for Sustainable Development, was revealed as followings.

**Confirmatory Factors Analysis of Endogenous Variables of Inspiration of Public Mind (PM)**

Confirmatory Factors of Inspiration of Public Mind (PM) had Bartlett’s test of Sphericity of 765.822 statistically significant level (p< .01) and Kaiser–Meyer–Olkin Measure of Sampling Adequacy/MSA of 0.849. This indicated that components of Public Mind (PM) aspect had proper relationship at good level and it can be sed for analysis of confirmatory factors as shown in picture 3 and table 4.

**Picture 3: Model of Confirmatory factor of Inspiration of Public Mind**
Chi-Square=2.59, df=2, P-value=0.27374, RMSEA=0.033

Table 4: Results of Analysis of Confirmatory factors of Inspiration of Public Mind

<table>
<thead>
<tr>
<th>Confirmatory factors of Inspiration of Public Mind</th>
<th>Weight</th>
<th>SE</th>
<th>t</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y5 Person as Role Model</td>
<td>0.65</td>
<td>0.040</td>
<td>15.15**</td>
<td>0.62</td>
</tr>
<tr>
<td>Y6 Impressive Event</td>
<td>0.66</td>
<td>0.040</td>
<td>17.29**</td>
<td>0.73</td>
</tr>
<tr>
<td>Y7 Impressive Environment</td>
<td>0.66</td>
<td>0.040</td>
<td>17.84**</td>
<td>0.76</td>
</tr>
<tr>
<td>Y8 Media Receiving</td>
<td>0.81</td>
<td>0.033</td>
<td>18.97**</td>
<td>0.82</td>
</tr>
</tbody>
</table>

Table 4: Results of Analysis of Confirmatory factors of Inspiration of Public Mind

From picture 3 and table 4, results of analysis of confirmatory factors of PM from 4 observed variables was revealed that the model was congruent to empirical data by considering from 1) Goodness of Fit Index (GFI) equaled to 1.00 and Adjust Goodness of Fit Index (AGFI) equaled to 0.98 2) Root Mean Square Error of Approximation (RMSEA) equaled to 0.000 (RMSEA < 0.05) and 3) Chi- Square value had no statistically significant at level of .01 and degree of freedom was lesser than or equaled to .05 and \( \chi^2 / df \leq 5.00 \). Considering on loading weight of observed variables in model, it was revealed that observed variables had loading weight with 0.65 to 0.81 and had covariate to model of Inspiration of Public Mind (PM) with 62.00 to 82.00 percents.
Confirmatory Factors Analysis of Endogenous Variables of Environmental Behaviors

Confirmatory Factors of Environmental Behaviors (CB) had Bartlett’s test of Sphericity of 537.564 statistically significant level (p< .01) and Kaiser–Mayer–Olkin Measure of Sampling Adequacy/MSA) of 0.824. This indicated that components of CB aspect had proper relationship at good level and it can be used for analysis of confirmatory factors as shown in picture 4 and table 5.

**Picture 4: Model of Confirmatory factors of Environmental Behaviors (CB)**

![Model of Confirmatory factors of Environmental Behaviors (CB)](image)

**Table 5: Results of Analysis of Confirmatory factors of Environmental Behaviors**

<table>
<thead>
<tr>
<th>Confirmatory factors of Environmental Behaviors</th>
<th>Weight</th>
<th>SE</th>
<th>t</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1 Energy Conservation</td>
<td>0.65</td>
<td>0.045</td>
<td>14.58**</td>
<td>0.63</td>
</tr>
<tr>
<td>Y2 Waste Management</td>
<td>0.63</td>
<td>0.041</td>
<td>15.30**</td>
<td>0.68</td>
</tr>
<tr>
<td>Y3 Forest Conservation</td>
<td>0.52</td>
<td>0.041</td>
<td>12.83**</td>
<td>0.54</td>
</tr>
<tr>
<td>Y4 Knowledge Transferring for Environmental Conservation</td>
<td>0.64</td>
<td>0.045</td>
<td>14.09**</td>
<td>0.61</td>
</tr>
</tbody>
</table>

Chi-square = 0.08  
df = 1  
P = 0.77356  
GFI = 1.00  
AGFI = 1.00  
RMSEA = 0.000  
RMR = 0.0011  
** Statistically significant level of .01

From picture 4 and table 5, results of analysis of confirmatory factors of Environmental Behaviors (CB) from 4 observed variables was revealed that the model was congruent to empirical data by considering from 1) Goodness of Fit Index (GFI) equaled to 1.00 and Adjust
Goodness of Fit Index (AGFI) equaled to 1.00, 2) Root Mean Square Error of Approximation (RMSEA) equaled to 0.000 (RMSEA < 0.05) and 3) Chi- Square value had no statistically significant at level of .01 and degree of freedom was lesser than or equaled to .05 and $\chi^2 / df \leq 5.00$.

Considering on loading weight of observed variables in model, it was revealed that observed variables had loading weight with 0.52 to 0.65 and had covariate to model of Environmental Behaviors with 54.00 to 68.00 percents.

**Results of Effect among Variables in Model in Terms of Direct and Indirect Effect**

a. Confirmatory factors of Environmental Education (EE) and Environmental Management (EM) had direct effect to Inspiration of Public Mind (PM) with statistically significant at level of .01 with effect of -0.59 and 1.30. Moreover, Environmental Education (EE) and Environmental Management (EM) had direct effect to Environmental Conservation Behaviors (CB) with statistically significant at level of .01 with effect of 0.12 and 0.20. In addition, confirmatory factors in aspect of Environmental Education (EE) and Environmental Management (EM) had indirect effect to Environmental Conservation Behaviors (CB) with statistically significant at level of .01 with effect of -0.2714 and 0.598.

b. Confirmatory factors of Inspiration of Public Mind (PM) had direct effect to Environmental Conservation Behaviors (CB) with statistically significant at level of .01 with effect of 0.43. Considering on structural model confirmatory factors of Environmental Education (EE) and Environmental Management (EM) were able to explain the variation of endogenous factors of Inspiration of Public Mind (PM) to caused Environmental Conservation Behaviors (CB) with 87.00 percents. As a result, the equation 1 can be written as following.

$$CB = 0.43*PM + 0.20*EM +0.12*EE \ (1)$$

$$R^2 = 0.87$$

Equation (1) factors that had the most effect to Environmental Behaviors (BC) was Inspiration of Public Mind (PM) and subsequences were Environmental Education (EE) and Environmental Management (EM), these were able to explained the variation of Environmental Conservation Behaviors (CB) with 87.00 percents Moreover, confirmatory factors of Environmental Education (EE) and Environmental Management (EM) were able to explain the variation of confirmatory factors of Inspiration of Public Mind (PM) with 75.0 percents. Therefore, the equation can be written as following equation 2.

$$PM = 1.30*EM - 0.57*EE \ (2)$$

$$R^2 = 0.75$$

**Picture 5:** Model of Direct and Indirect Effect of EE and EM through PM Influencing to CB
Discussion
The findings indicated that EE had direct influencing to inspiration of public mind and environmental conservation behaviors with highly statistically significant at level of .01 with effect of 0.59 and 0.12. Moreover, when considering on prediction of correlation of observed variables of Environmental Awareness (X3), Environmental Attitude (X2), Environmental Responsibility (X5), Environmental Public Mind (X4), and Knowledge and Understanding (X1) can predict the EE rather high with 0.82, 0.72, 0.70, 0.64, and 0.30 respectively. These were congruent to different studies of Thiengkamol and her colleagues (Thiengkamol, 2004, Thiengkamol, 2005a, Thiengkamol, 2011a, Thiengkamol, 2011g, Thiengkamol, 2011i, Thiengkamol, 2012a, Thiengkamol, 2012b, Thiengkamol, 2012c, Jumrearnsan, & Thiengkamol, 2012, Dornkornchum, et al, 2012a, Gonggoool, et al, 2012b, Ngarmsang, et al, 2012b, Pimdee, et al, 2012a, Ruboon, et al, 2012a, and Waewthaisong, et al, 2012a) that the results illustrated that inspiration of public mind would inspire elementary school student to perform better environmental behaviors whether energy conservation, waste management behavior, forest conservation, and knowledge transferring and supporting for environmental conservation when they had real practice through environmental conservation with inspiration of public mind. Moreover, environmental management activity such as energy conservation through daily life practice for electrical and pipe water conservation, waste management based on waste bank concept and tree conservation with tree cultivation in school also lead to good practice of environmental behavior for sustainable development though various environmental behavior such
as energy conservation behavior, recycling behavior and forest conservation. Consequently, EM had direct influencing to inspiration of public mind and environmental conservation behaviors with highly statistically significant at level of .01 with effect of 1.30 and 0.20. Additionally, when considering on prediction of correlation of observed variables of Energy Conservation (X6), Waste Management (X7) and Tree Conservation (X8) can predict the EM rather high with 0.77, 0.69, and 0.66 respectively. These were congruent to different studies of Thiengkamol and her colleagues (Thiengkamol, 2004, Thiengkamol, 2005a, Thiengkamol, 2011b, Thiengkamol, 2011g, Thiengkamol, 2011i, Thiengkamol, 2011j, Thiengkamol, 2012c, Thiengkamol, 2012d, Gonggool, et al, 2012b, Ngarmsang, et al, 2012b, and Pimdee, et al, 2012a).

Moreover, Inspiration of Public Mind (PM) had direct effect to Environmental Conservation Behaviors (CB) with statistically significant at level of .01 with effect of .46. Particularly, when considering on prediction of correlation of observed variables of Person as Role Model (Y5), impressive Environment (Y6), Impressive Event (Y7), and Media Receiving (Y8), can predict the PM rather high with 0.62, 0.73, 0.76, and 0.82 respectively. (Thiengkamol, 2011i, Thiengkamol, 2011j, Thiengkamol, 2012c, Thiengkamol, 2012d, Dornkornchum, and Thiengkamol, 2012, Dornkornchum, et al, 2012a, Gonggool, et al, 2012b, Ngarmsang, et al, 2012b, Ruboon, et al, 2012a, Pimdee, et al, 2012, and Waewthaisong, et al, 2012a). However, it might be concluded that EE observed from observed variables of Environmental Attitude (X1), Knowledge and Understanding (X2), Environmental Awareness (X3), Environmental Public Mind (X4), and Environmental Responsibility (X5) and EM observed from observed variables of Energy Conservation (X6), Waste Management (X7) and Tree Conservation (X8) can influence through Inspiration of Public Mind (PM) composing of Person as Role Model (Y5), impressive Environment (Y6), Impressive Event (Y7), and Media Receiving (Y8), to Environmental Conservation Behavior (CB) that included Energy Conservation (Y1), Waste Management (Y2), Forest Conservation (Y3), and Knowledge Transferring for Environmental Conservation (Y4). Therefore, the model of EE and EM influencing through PM to CB was verified the proposed model was fitted with all observed variables according to criteria of Chi-Square value differs from zero with no statistical significant at .01 level or Chi-Square/df value with lesser or equal to 2, P-value with no statistical significant at .01 level and RMSEA (Root Mean Square Error Approximation) value with lesser than 0.05 including index level of model congruent value, GFI (Goodness of Fit Index) and index level of model congruent value, AGFI (Adjust Goodness of Fit Index) between 0.90-1.00.

References


